## LIGHTING FIXTURES

- FLUORESCENT LIGHTING FIXTURE CONNECTED TO NORMAL CIRCUIT AS INDICATED TYPE AS SPECIFIED IN SCHEDULE. "A" INDICATES TYPE, "3" INDICATES CIRCUIT NUMBER ASSIGNMENT, "a" INDICATES LOCAL SWITCHING CONTROL. CONNECT FIXTURES SO THAT ALL LAMPS ARE CONTROLLED BY \$0
- FLUORESCENT LIGHTING FIXTURE CONNECTED TO NORMAL CIRCUIT TYPE AS SPECIFIED IN SCHEDULE, "A" INDICATES TYPE, "3" INDICATES CIRCUIT NUMBER ASSIGNMENT. CONNECT FIXTURES SO THAT MIDDLE LAMP(S) IS CONTROLLED BY \$0 AND OUTER LAMPS ARE CONTROLLED BY \$b AS INDICATED BY "a.b"
- FLUORESCENT LIGHTING FIXTURE CONNECTED TO EMERGENCY LIFE SAFETY AND NORMAL CIRCUIT TYPE AS SPECIFIED IN SCHEDULE, "A" INDICATES TYPE, "3" INDICATES EMERGENCY LIFE SAFETY CIRCUIT NUMBER ASSIGNMENT, "5" INDICATES NORMAL CIRCUIT NUMBER ASSIGNMENT. CONNECT FIXTURES SO THAT MIDDLE LAMP IS CONNECTED TO LIFE SAFETY CIRCUIT AHEAD OF LOCAL SWITCHING AND TWO OUTER LAMPS ARE CONNECTED TO NORMAL CIRCUIT AND
- FLUORESCENT LIGHTING FIXTURE CONNECTED TO EMERGENCY LIFE SAFETY TYPE AS SPECIFIED IN SCHEDULE, "A" INDICATES TYPE, "3" INDICATES EMERGENCY LIFE SAFETY CIRCUIT NUMBER ASSIGNMENT.
- FLUORESCENT LIGHTING FIXTURE CONNECTED TO EMERGENCY LIFE SAFETY TYPE AS SPECIFIED IN SCHEDULE, "A" INDICATES TYPE, "3" INDICATES EMERGENCY LIFE SAFETY CIRCUIT NUMBER ASSIGNMENT. PROVIDE GENERATOR TRANSFER DEVICE TO CONTROL ALL EMERGENCY DEVICES DESIGNATED WITH "G". SEE "GENERATOR TRANSFER DETAIL" FOR ADDITIONAL WORK REQUIREMENTS.
- FLUORESCENT LIGHTING FIXTURE CONNECTED TO EMERGENCY CRITICAL CIRCUIT TYPE AS SPECIFIED IN SCHEDULE. "A" INDICATES TYPE, "3" INDICATES CIRCUIT NUMBER ASSIGNMENT. CONNECT FIXTURES SO THAT ALL LAMPS ARE CONTROLLED BY \$a
- FLUORESCENT LIGHTING FIXTURE CONNECTED TO EMERGENCY CRITICAL AND NORMAL CIRCUIT TYPE AS SPECIFIED IN SCHEDULE, "A" INDICATES TYPE, "3" INDICATES EMERGENCY LIFE SAFETY CIRCUIT NUMBER ASSIGNMENT. "5" INDICATES NORMAL CIRCUIT NUMBER ASSIGNMENT. CONNECT FIXTURES SO THAT MIDDLE LAMP IS CONNECTED TO CRITICAL CIRCUIT CONTROLLED BY \$0 AND TWO OUTER LAMPS ARE CONNECTED TO NORMAL CIRCUIT AND CONTROLLED BY \$0
- LED OR COMPACT FLUORESCENT LIGHTING FIXTURE, CONNECTED TO NORMAL CIRCUIT TYPE AS SPECIFIED IN
- LED OR COMPACT FLUORESCENT LIGHTING FIXTURE, CONNECT TO EMERGENCY CIRCUIT TYPE AS SPECIFIED IN SCHEDULE.
- EXIT SIGN CONNECT TO EMERGENCY LIFE SAFETY CIRCUIT AHEAD OF LOCAL SWITCHING. TYPE AS SPECIFIED IN
- EMERGENCY BATTERY LIGHTING FIXTURE CONNECT TO EMERGENCY LIFE SAFETY CIRCUIT AHEAD OF LOCAL SWITCHING. TYPE AS SPECIFIED IN SCHEDULE.

## LIGHTING CONTROLS

- 20A-1P-120/277V WALL SWITCH MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED.
- \$LV 24VAC SINGLE SWITCH FOR CONTROL OF (1) LIGHTING CONTROL PANEL RELAY. CONNECT TO LIGHTING CONTROL PANEL VIA 3/4"C - 2 #12 & 1 TWISTED, SHIELDED PAIR #18AWG. VERIFY EXACT WIRING REQUIREMENTS WITH MANUFACTURERS WIRING DIAGRAMS PRIOR TO ORDERING.
- \$3 20A-3WAY-120/277V WALL SWITCH MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED.
- 120/277V, 8A SINGLE POLE/3-WAY PRESET LARGE PADDLE SWITCH WITH SMALL DIMMER SLIDER, AUTOMATICALLY RETURNS TO PRESET LEVEL, ENGRAVING LABEL, SLIDE ADJUSTER - MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED.
- 277V SINGLE POLE 0-10VDC LOW-VOLTAGE LARGE PADDLE SWITCH WITH SMALL DIMMER SLIDER, AUTOMATICALLY RETURNS TO PRESET LEVEL - ENGRAVING LABEL - MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED. VERIFY ALL SWITCHES ARE COMPATIBLE WITH FIXTURE TYPE.
- 20A-1P-120/277V CLEAR PILOT LIGHT SWITCH, LIGHT ON WITH LOAD ON MOUNTED AT 48" AFF UNLESS OTHERWISE
- 277V SINGLE POLE LARGE PADDLE SWITCH WITH SMALL DIMMER SLIDER, AUTOMATICALLY RETURNS TO PRESET LEVEL. ENGRAVING LABEL - MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED. VERIFY ALL SWITCHES ARE COMPATIBLE WITH FIXTURE
- 120/277V, WALL SWITCH ON/OFF WITH DUAL TECHNOLOGY OCCUPANCY SENSOR MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED. VERIFY ALL SWITCHES ARE COMPATIBLE WITH FIXTURE TYPE.
- OCCUPANCY/VACANCY SENSOR PROVIDE COMPLETE OCCUPANCY SENSOR SYSTEM INCLUDING SENSOR, POWER SUPPLY AND RELAY UNIT. REFER TO "OCCUPANCY SENSOR PROGRAM SCHEDULE" AND "OCCUPANCY SENSOR SYSTEM SPECIFICATIONS" FOR ADDITIONAL INFORMATION.

SENSOR DESIGNATIONS
U - ULTRASONIC TYPE SENSOR

R - INFRARED TYPE SENSOR D - DUAL TECHNOLOGY TYPE SENSOR

RELAY DESIGNATIONS

# - PROVIDE RELAY WITH NORMALLY OPEN (N.O.) CONTACT(S), # DENOTES THE QUANTITY OF N.O. RELAYS. IF BLANK, PROVIDE (1) N.O. RELAYS.

H - PROVIDE FORM C'RELAY IN RELAY UNIT FOR HVAC SWITCHING

S - "SPECIAL COVERAGE", TWO SIDED, 90 LINEAR FT. COVERAGE

**EXAMPLES:** 

ULTRASONIC SENSOR WITH (2) N.O. CONTACTS

DH DUAL TECHNOLOGY SENSOR WITH (1) N.O. CONTACT AND (1) FORM C RELAY

# LIGHTING CONTROLS SYSTEM GENERAL NOTES:

- 1. ALL COMPONENTS FOR OCCUPANCY AND DAYLIGHT HARVESTING SYSTEM SHALL BE FROM A SINGLE MANUFACTURER AND UL LABELED.
- SENSORS (OCCUPANCY/VACANCY, DAYLIGHT HARVESTING, ETC.) MAY BE STAND ALONE, COMBINATION, OR INTEGRATED WITH LIGHTING
- PROVIDE ALL ADDITIONAL COMPONENTS NECESSARY FOR COMPLETE SYSTEM PER MANUFACTURER'S REQUIREMENTS.
- 4. SUBMIT WIRING DIAGRAMS SHOWING COMPLETE LIGHTING CONTROLS CONNECTIONS TO ENGINEER FOR REVIEW WITH SHOP DRAWINGS.
- 5. PROVIDE POWER SUPPLY FOR LOW-VOLTAGE SWITCHES AS REQURIED.

### WIRING DEVICES

- 20A-125V, HOSPITAL GRADE, GROUNDED SINGLE RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.
- 20A-125V, HOSPITAL GRADE, GROUNDED DUPLEX RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.
- 20A-125V, HOSPITAL GRADE, GROUNDED DUPLEX RECEPTACLE, CEILING MOUNT.
- 20A-125V, HOSPITAL GRADE, GROUNDED TAMPER RESISTANT RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.
- DOUBLE 20A-125V, HOSPITAL GRADE, GROUNDED DUPLEX RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.
- 20A-125V. HOSPITAL GRADE, GROUND FAULT INTERRUPTER RECEPTACLE, MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.

SAME DEVICE TYPES AS INDICATED ABOVE EXCEPT CONNECTED TO EMERGENCY CRITICAL CIRCUIT.

- SPECIAL RECEPTACLE TYPE REFER TO DRAWINGS FOR CONFIGUARTION REQUIREMENTS. MOUNT AT 18" AFF UNLESS OTHERWISE NOTED. CONNECT TO NORMAL CIRCUIT.
- POWER CONNECTION WALL BOX FOR PRE-WIRED FURNITURE 4" SQ. JUNCTION BOX MOUNTED AT 18" AFF FOR CONNECTION TO FURNITURE. PROVIDE WIRING AS INDICATED ON PLANS TO PRE-WIRED FURNITURE WITH "4 CIRCUIT 8 WIRES" CONFIGURATION. EC SHALL VERIFY THE NUMBER OF CIRCUITS AND WIRING CONFIGURATION OF PRE-WIRED FURNITURE FURNISHED BY OWNER PRIOR TO ROUGH-IN. CONTRACTOR SHALL MAKE FINAL CONNECTION TO FURNITURE. ALL CIRCUITS
- POWER INTERCONNECTION OF PRE-WIRED FURNITURE REPRESENTS PHYSICAL CONNECTION BETWEEN PRE-WIRED FURNITURE WORKSTATION TO BE CONNECTED BY CONTRACTOR.

WITH SHARED NEUTRAL FOR PRE-WIRED FURNITURE CONNECTION SHALL BE TIED SO THAT BREAKERS TRIP TOGETHER.

- RECESSED METALLIC MULTI-SERVICE FLOOR BOX, 10"L x 10"W x 4"DEEP INSTALLED IN CONCRETE FLOOR WITH (1)DUPLEX RECEPTACLES AND (1)TELEPHONE/DATA OUTLET - POWER AND COMMUNICATIONS CABLING SHALL BE ROUTED IN SEPARATE CONDUITS. FLOOR BOX SHALL BE FURNISHED WITH REMOVABLE NONMETALLIC CHAMBER PLUGS, FLUSH COVER AND CARPET FLANGE, BLANKS FOR UNUSED CHAMBERS AND SHALL BE FULLY ADJUSTABLE. CONTRACTOR SHALL VERIFY THAT DEPTH OF EXISTING CONCRETE FLOOR THICKNESS MEETS INSTALLATION REQUIREMENTS OF THE FLOOR BOX.
- EMERGENCY POWER OFF PUSHBUTTON "EPO" MOUNTED AT 48" AFF. REFER TO ELECTRICAL PLANS FOR TYPE.
- DOOR SWITCH NORMALLY OPEN/NORMALLY CLOSED CONTACTS. MOUNT IN DOOR FRAME.

SURFACE MOUNTED METAL RACEWAY WITH (2) CHANNELS (TOP - POWER, BOTTOM - VOICE/DATA) -4-3/4"H x 1-3/4"D WITH DIVIDER. (OUTLETS AS DESIGNATED ON DRAWINGS), MOUNTED AT 3'-6" AFF UNLESS OTHERWISE NOTED. SURFACE MOUNTED RACEWAY SHALL BE FED FROM EMT CONDUITS CONCEALED IN WALL (3/4"C MINIMUM FOR POWER, 1"C MINIMUM FOR VOICE/DATA). - REFER TO SURFACE RACEWAY SECTION/WALL ENTRY DETAIL. PROVIDE ALL COMPONENTS (ELBOWS, COUPLINGS, ENDCAPS, ETC.) NECESSARY FOR A COMPLETE INSTALLATION. REFER TO SURFACE RACEWAY SECTION/WALL ENTRY DETAIL.

EXISTING SURFACE MOUNTED RACEWAY WITH RECEPTACLES.

### GENERAL ELECTRICAL INSTALLATION NOTES:

- . ALL MOUNTING HEIGHTS ARE TO CENTER OF DEVICE UNLESS OTHERWISE NOTED.
- 2. ALL NEW WALL MOUNTED ELECTRICAL DEVICES ARE TO BE INSTALLED FLUSH IN WALL UNLESS OTHERWISE NOTED. ALL ELECTRICAL CONDUIT SHALL BE CONCEALED BEHIND FINISHED WALLS AND ABOVE FINISHED CEILING UNLESS OTHERWISE NOTED. THE COST TO CUT AND PATCH WALLS SHALL BE THE RESPONSIBILITY OF THE TRADE REQUIRING THE CUTTING.
- 3. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACEMENT OF CEILINGS REQUIRED FOR ELECTRICAL WORK. CONTRACTOR SHALL REPLACE ANY DAMAGED CEILING TILES.
- 4. PRIOR TO INSTALLATION, VERIFY PRECISE LOCATION OF NEW OR RELOCATED WALL OR CEILING MOUNTED DEVICES WITH ARCHITECTURAL ELEVATIONS AND REFLECTED CEILING PLANS.
- 5. COORDINATE ALL SHUT-DOWNS OF EXISTING ELECTRICAL SYSTEMS WITH OWNER A MINIMUM OF FOURTEEN (14) WORKING DAYS IN ADVANCE. ALL SHUT-DOWNS SHALL OCCUR DURING WEEKENDS OR BETWEEN 8:00PM AND 7:00AM ON WEEKDAYS ("OFF-HOURS"). INCLUDE ALL PREMIUM TIME CHARGES IN BID.
- 6. ALL NOISE GENERATING OPERATIONS, INCLUDING CUTTING OF CEILINGS, WALLS AND FLOORS, CORING, DRILLING, ETC. SHALL BE SCHEDULED IN ACCORDANCE WITH PROJECT SPECIFICATIONS (SECTION 01 00 00). INCLUDE ALL PREMIUM TIME CHARGES IN BID.
- CONTRACTOR SHALL CONNECT ALL MECHANICAL EQUIPMENT COMPLETE PER MANUFACTURER'S WIRING DIAGRAMS AND INSTRUCTIONS. COORDINATE WITH MECHANICAL CONTRACTOR AND VERIFY LOCATION, VOLTAGE, AMPS, NO. OF WIRES, AND PROTECTION REQUIREMENTS PRIOR TO ROUGH-IN. CONTACT ENGINEER WITH ANY DISCREPANCIES FROM DESIGN DRAWINGS.
- 8. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR FINAL CONNECTION TO MECHANICAL EQUIPMENT OR OTHER EQUIPMENT WHICH MAY

9. ALL FLUORESCENT LAMPS THAT WILL NOT BE REUSED SHALL BE DISPOSED OF IN ACCORDANCE WITH EPA STANDARDS, AND WRITTEN

- EVIDENCE OF PROPER DISPOSAL SHALL BE FURNISHED TO THE OWNER. 10. ALL WORK SHALL BE PERFORMED IN STRICT CONFORMANCE WITH THE PHASING REQUIREMENTS OF THE PROJECT. ALL COSTS
- ASSOCIATED WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE BID SUBMITTAL.
- 11. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING TO ADEQUATELY LIGHT ALL CONSTRUCTION AREAS, TEMPORARILY PARTITIONED AREAS, AND EXIT CORRIDORS MAINTAINED DURING CONSTRUCTION.
- 12. <u>DEFINITION:</u> "PROVIDE" FURNISH, INSTALL AND CONNECT COMPLETE.
- 13. PROJECT AND PHASING SCOPE LINES INDICATE WHERE GENERAL CONSTRUCTION BOUNDARIES OCCUR. ELECTRICAL WORK AND UTILITY TIE-INS MAY OCCUR OUTSIDE OF SCOPE LINES.
- 14. SEE DRAWING 1-T1.1 FOR ABBREVIATIONS CONTAINED WITHIN DRAWINGS.

#### POWER DISTRIBUTION EQUIPMENT (FLOOR PLAN VIEW)

- 208/120V-3ø-4W PANELBOARD UNLESS OTHERWISE NOTED. MOUNT AT 78" AFF TO TOP OF PANEL.
- 480/277V-30-4W PANELBOARD UNLESS OTHERWISE NOTED. MOUNT AT 78" AFF TO TOP OF PANEL.
- GENERAL PURPOSE, 3 PHASE DRY-TYPE TRANSFORMER TYPE AS NOTED ON PLANS.
- FUSED DISCONNECT SWITCH SIZE AND TYPE AS NOTED. PROVIDE CLASS RK1 FUSES UNLESS OTHERWISE NOTED. NEMA 1 ENCLOSURE UNLESS OTHERWISE NOTED.
- GROUNDING BUSBAR

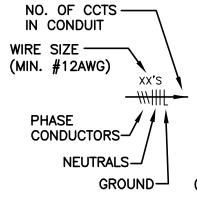
# MOTOR AND MOTOR CONTROLLERS (FLOOR PLAN VIEW)

- COMBINATION FUSED MAGNETIC MOTOR STARTER COMPLETE WITH "HAND-OFF-AUTO" SELECTOR SWITCH AND RED "RUN" PILOT LIGHT IN COVER. NEMA SIZE O CONTACTS AND NEMA 1 ENCLOSURE MINIMUM UNLESS OTHERWISE NOTED.
- VARIABLE SPEED MOTOR CONTROLLER (REFER TO SPECIFICATIONS SECTION 262911).
- 120V-10 OR 277V-10 (AS REQUIRED) MANUAL MOTOR STARTER WITH INTEGRAL OVERLOAD PROTECTION
- 120V-10 OR 277V-10 (AS REQUIRED) MOTOR STARTER COMPLETE WITH INTEGRAL OVERLOAD PROTECTION AND "HAND-OFF-AUTO" SELECTOR SWITCH.
- 120V-10 OR 277V-10 (AS REQUIRED) LOCKABLE MANUAL SWITCH (NO THERMAL OVERLOADS).
- CONTROLLER FURNISHED WITH EQUIPMENT.

# WIRING TERMINATIONS

- JUNCTION BOX, CEILING OR WALL MOUNTED, 4" SQ. WITH GROUND LUG, UNLESS OTHERWISE NOTED. COORDINATE MOUNTING LOCATION WITH EQUIPMENT. SC - SINK STATION CONTROLS. CONNECT PER MANUFACTURES WIRING DIAGRAM.
  - CP MECHANICAL EQUIPMENT CONTROL PANEL. CONNECT PER MANUFACTURES WIRING DIAGRAM. EWC- ELECTRIC WATER COLOR. PROVIDE GFCI BREAKER.
- JUNCTION BOX, ABOVE CEILING FOR CONNECTION TO 120V AUTOMATIC DOOR. ELECTRICAL CONTRACTOR SHALL CONNECT AUTOMATIC DOOR INCLUDING PUSH PAD OPERATORS PER MANUFACTURER'S INSTRUCTIONS TO 120V EMERGENCY LIFE SAFETY CIRCUIT. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL AUTOMATIC DOOR.
- JUNCTION BOX MOUNTED AT 48" AFF FOR CONNECTION TO AUTOMATIC DOOR PUSH PAD DEVICE. PROVIDE 3/4"C TO DOOR CONTROLLER WITH WIRING PER MANUFACTURER'S REQUIREMENTS.
- MOTOR NUMBER DENOTES HORSEPOWER
- TEMPERATURE CONTROL PANEL FURNISHED AND INSTALLED BY OTHERS. EC SHALL PROVIDE 120V CONNECTION (HARDWIRED OR RECEPTACLE, AS REQUIRED).
- EC SHALL PROVIDE 20A-120V CIRCUIT IN ABOVE FINISHED CEILING MOUNTED JUNCTION BOX FOR VAV TERMINALS. CONNECT ALL VAV'S IN AREA TO CIRCUIT INDICATED. MC SHALL PROVIDE CONTROL TRANSFORMER AND CONTROL WIRING FOR 24VAC VAV TERMINALS. VERIFY LOCATION OF ALL ADJACENT VAV'S WITH MECHANICAL DRAWINGS.
- MEDICAL GAS ALARM PANEL CONNECT TO 20A, 120V LIFE SAFETY CIRCUIT, WALL MOUNTED, COORDINATE MOUNTING

# BRANCH CIRCUIT WIRING



BRANCH CIRCUIT HOME RUN TO PANEL - ARROWHEADS INDICATE CIRCUITS. WIRE INDICATED ARE GREEN GROUND, SEPARATE NEUTRALS (SHARED NEUTRALS ARE NOT PERMITTED FOR BRANCH CIRCUITS) AND THREE HOT LEGS (A DIFFERENT PHASE FOR EACH CIRCUIT) MAXIMUM THREE CIRCUITS PER CONDUIT. 3/4" MINIMUM CONDUIT WITH WIRE SIZE INDICATED ON DRAWING ("XX" INDICATES AWG SIZE). ALL POWER WIRING SHALL BE STRANDED COPPER CONDUCTORS WITH THHN/THWN INSULATION. PROVIDE SEPARATE EQUIPMENT GROUNDING CONDUCTOR (SAME SIZE AS PHASE AND NEUTRAL, UNLESS OTHERWISE NOTED) FOR EACH CONDUIT. CONDUIT WIRE FILLS SHALL BE IN ACCORDANCE WITH LATEST NATIONAL ELECTRIĆ CODE.

O CONDUIT UP

CONDUIT DOWN

**FULLY SPRINKLERED** 

**CONSULTANTS:** 

01/17/14

Bid Issue

Revisions:

VA FORM J8-6231, OCT 1978

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**ELECTRICAL LEGEND** 

Drawing Title

**VAMC - WADE PARK** Checked

1-17-2014

1-E1.1 TWM

Veterans Affairs

### GENERAL LIGHTING INSTALLATION NOTES:

- L1. REFER TO ELECTRICAL SPECIFICATIONS FOR FLUORESCENT LAMP COLOR AND BALLAST TYPE.

  L2. REFER TO LIGHTING FIXTURE DETAILS DRAWING 1—E4 FOR VISUAL REPRESENTATION OF
- L3. CONTRACTOR SHALL COORDINATE LIGHTING FIXTURE TYPE (GRID OR FLANGE) WITH ACTUAL CEILING TYPE PRIOR TO ORDERING FIXTURES. CONTACT ENGINEER IF QUESTIONS SHOULD ARISE CONCERNING CEILING TYPES.
- L4. CONTRACTOR SHALL VERIFY ALL BALLAST QUANTITIES WITH SWITCHING SHOWN ON PLANS PRIOR TO ORDERING FIXTURES. ADJUST BALLAST QUANTITIES AS REQUIRED TO MATCH
- L5. VERIFY LIGHTING CIRCUIT VOLTAGE (277V-1ø OR 120V-1ø) PRIOR TO ORDERING LIGHTING FIXTURES OR STARTING ROUGH-IN OF BRANCH CIRCUITS. IMMEDIATELY CONTACT ENGINEER WITH ANY DISCREPANCIES. CONTRACTOR IS RESPONSIBLE FOR ORDERING THE PROPER VOLTAGE FOR LIGHTING FIXTURES, REGARDLESS OF VOLTAGE SHOWN ON LIGHTING FIXTURE
- L6. CONTRACTOR SHALL VERIFY ALL FIXTURES TO BE CONTROLLED BY DIMMER SWITCHES AS SHOWN ON PLANS PRIOR TO ORDERING FIXTURES. PROVIDE ARCHITECTURAL DIMMING BALLASTS (FLUORESCENT) OR DRIVER (LED) WITH DIMMING RANGE FROM AS SHOWN TABLE ABOVE, AND COMPATIBLE DIMMER CONTROLS WHERE DIMMING IS INDICATED ON PLANS.
- L7. PROVIDE 100 HOURS BURN-IN TIME AT FULL BRIGHTNESS FOR ALL LAMPS IN DIMMED FLUORESCENT LIGHTING FIXTURES.
- L8. PROVIDE DISCONNECTING MEANS FOR ALL FLUORESCENT FIXTURES THAT UTILIZE DOUBLE—ENDED LAMPS AND CONTAIN BALLAST(S) THAT CAN BE SERVICED IN PLACE. THE DISCONNECTING MEANS SHALL BE ACCESSIBLE AND SHALL SIMULTANEOUSLY BREAK ALL THE SUPPLY CONDUCTORS TO THE BALLAST (INCLUDING THE GROUNDED CONDUCTOR).
- L9. REFER TO ELECTRICAL SPECIFICATIONS FOR LED COLOR TEMPERATURE AND DRIVER TYPE.

L13. REFER TO LIGHTING FIXTURE DETAILS DRAWING FOR REPRESENTATION OF FIXTURE STYLE.

- L10. LINEAR FLUORESCENT LAMPS SHALL HAVE A CRI OF 82 OR GREATER.
- L11. COMPACT FLUORESCENT LAMPS SHALL HAVE A CRI OF 80 OR GREATER.
- L12. SUBMIT LAMP AND BALLAST CUT SHEETS WITH SHOP DRAWINGS FOR REVIEW.
- L14. LED FIXTURES MAY HAVE A COLOR TEMPERATURE FROM 4000-4200.

### BALLAST/DRIVER ABBREVIATIONS

<u>LF BALLAST</u> — LINEAR FLUORESCENT LAMP BALLAST

CF BALLAST - COMPACT FLUORESCENT LAMP BALLAST

<u>LED DRIVER</u> — LIGHT—EMITTING DIODE DRIVER WITH 100% DOWN TO 10% (OR LOWER) LOW-VOLTAGE DIMMING

<u>DIMMING LF BALLAST</u> — DIMMING LINEAR FLUORESCENT LAMP BALLAST 100% DOWN TO 5% (OR LOWER) OR AS NOTED.

<u>DIMMING ADDRESS LF BALLAST</u> — ADDRESSABLE DIMMING BALLAST 100% DOWN TO 5% (OR LOWER). MUST BE COMPATIBLE WITH OTHER ADVANCE LIGHTING CONTROLS — SEE ELECTRICAL LEGEND FOR ADDITIONAL WORK REQUIREMENTS.

DIMMING CF BALLAST - DIMMING COMPACT FLUORESCENT LAMP BALLAST

<u>DIMMING LED DRIVER</u> — DIMMING LIGHT—EMITTING DIODE DRIVER WITH 100% DOWN TO 1% DIMMING

120-277V — MULTI-VOLTAGE BALLAST DETECTS INCOMING VOLTAGE AND ADAPTS AUTOMATICALLY

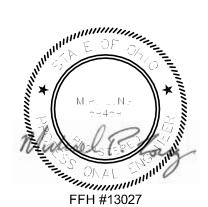
LIGHTING FIXTURE SCHEDULE											
TYPE	DESCRIPTION	LOCATION	MOUNTING	LAMP INFORMATION			BALLAST/DRIVER INFORMATION			MANUFACTURER/	
				QUANTITY	WATTS	TYPE	COLOR TEMP.	QUANTITY	TYPE	VOLTAGE	NOTES
	LED LIGHTING FIXTURE, $2' \times 2' \times 3-1/4"$ H, DUAL LUMINOUS PANEL OPTICAL SYSTEM WITH UNLIT CENTER, HIGH OPTICAL GRADE ACRYLIC LENS, PLANAR LIGHT GUIDE TECHNOLOGY UTILIZING EDGE—LIT PANELS, EXTRUDED ALUMINUM FRAME, L85 RATING OF AT LEAST 60,000 HOURS, MINIMUM 3400 LUMENS, 96 LUMENS PER WATT EFFICACY, HIGH REFLECTANCE BAKED MATTE WHITE ENAMEL FINISH, FUSING.	CORRIDOR/ OFFICE	LAY-IN GRID	1	25.5W	LED	4100°K	1	0-10V DIMMING DRIVER	120-277V	_
<b>@</b>	LED LIGHTING FIXTURE, $2' \times 4' \times 3-1/2"$ MAX HEIGHT RECESSED TROFFER, ACRYLIC K-19 LENS (.156" THICKNESS), FLAT WHITE STEEL DOOR FRAME, DIE FORMED STEEL RIGID HOUSING, 4800 MINIMUM DELIVERED LUMENS, MINIMUM OF 99 LUMEN PER WATT EFFICACY, AUXILIARY FIXTURE END SUSPENSION POINTS, FUSING, PAINT AFTER FABRICATION.	VARIOUS	LAY-IN GRID	1	50W MAX SYSTEM INPUT	LED	4100°K	1	LED DRIVER	120-277V	_
©	LED LIGHTING FIXTURE, $2' \times 4' \times 3-1/4"$ H, DUAL LUMINOUS PANEL OPTICAL SYSTEM WITH UNLIT CENTER, HIGH OPTICAL GRADE ACRYLIC LENS, PLANAR LIGHT GUIDE TECHNOLOGY UTILIZING EDGE—LIT PANELS , EXTRUDED ALUMINUM FRAME, L85 RATING OF AT LEAST 60,000 HOURS, MINIMUM 5400 LUMENS, 96 LUMENS PER WATT EFFICACY, HIGH REFLECTANCE BAKED MATTE WHITE ENAMEL FINISH, FUSING.	VARIOUS	LAY-IN GRID	1	54W	LED	4100°K	1	0-10V DIMMING DRIVER	120-277V	_
0	LED LIGHTING FIXTURE — 6" DIA. X 7" MAX HEIGHT RECESSED DOWNLIGHT, 1500 MINIMUM LUMENS, ALZAK SEMI—SPECULAR CLEAR REFLECTOR AND WHITE POLYMER TRIM, LED LIGHT BAR AND DRIVER ACCESSIBLE FROM BELOW THROUGH FIXTURE, CONVEX TRANSITIONAL LENS.	VARIOUS	LAY-IN GRID	1	23W MAX SYSTEM INPUT	LED	4100°K	1	LED DRIVER	277V	_
(Ē)	LED LIGHTING FIXTURE, $2' \times 4' \times 3-1/2$ " MAX HEIGHT RECESSED TROFFER, ACRYLIC K-19 LENS (.156" THICKNESS), FLAT WHITE STEEL DOOR FRAME, DIE FORMED STEEL RIGID HOUSING, 6500 MINIMUM DELIVERED LUMENS, MINIMUM OF 96 LUMEN PER WATT EFFICACY, AUXILIARY FIXTURE END SUSPENSION POINTS, FUSING, PAINT AFTER FABRICATION.	HOT LAB	LAY-IN GRID	1	65W MAX SYSTEM INPUT	LED	4100°K	1	0-10V DIMMING DRIVER	120-277V	_
©	LED LIGHTING FIXTURE $-23.5$ "Lx2 $-1/4$ "Hx3"D ARCHITECTURAL WALL MOUNTED VANITY WITH MATTE WHITE INNER DIFFUSER AND CLEAR ACRYLIC DIFFUSER, STEEL HOUSING W/ MATTE SILVER POWDER COAT FINISH, 2028 LUMEN OUTPUT.	BATHROOM	WALL MOUNT AT 8'-0" AFF	1	20W MAX SYSTEM INPUT	LED	4100K	1	LED	120-277V	_
□(K)□	LED LIGHTING FIXTURE, 7" x 4' x 6" MAX HEIGHT VAPORLUME FIXTURE, 5680 MINIMUM LUMEN OUTPUT, WIDE DISTRIBUTION, FUSING, WHITE MOLDED FIBERGLASS REINFORCED POLYESTER BODY, HIGH IMPACT ACRYLIC MOLDED LENS, GASKET, LISTED FOR WET LOCATION, STAINLESS STEEL MOUNTING BRACKETS.	MECH/ELEC ROOMS	MOUNT ON UNISTRUT SUSPENDED FROM CEILING AT 8'-6' AFF TO BOTTOM OF FIXTURE		72W MAX SYSTEM INPUT	LED	4000°K	1	LF BALLAST	120-277V	_
	LED LIGHTING FIXTURE, $2' \times 2' \times 3-1/4"$ H, DUAL LUMINOUS PANEL OPTICAL SYSTEM WITH UNLIT CENTER, HIGH OPTICAL GRADE ACRYLIC LENS, PLANAR LIGHT GUIDE TECHNOLOGY UTILIZING EDGE—LIT PANELS, EXTRUDED ALUMINUM FRAME, L85 RATING OF AT LEAST 60,000 HOURS, MINIMUM 3400 LUMENS, 96 LUMENS PER WATT EFFICACY, HIGH REFLECTANCE BAKED MATTE WHITE ENAMEL FINISH, FUSING.	VARIOUS	LAY—IN GRID	1	35W	LED	4100°K	1	0-10V DIMMING DRIVER	120-277V	_
Ō	LED LIGHTING FIXTURE — 2-0'Lx5-3-1/2"Hx7-1/2"D WALL MOUNTED LENSED STRIPLIGHT FIXTURE WITH CLEAR LENS. FUSING, PAINTED AFTER FABRICATION, MATTE WHITE ENAMEL FINISH, MINIMUM 65,000 HOUR L70, MINIMUM OF 2300 LUMEN OUTPUT, MINIMUM OF 98 LUMENS PER WATT EFFICACY.	STORAGE	WALL MOUNT ABOVE DOOR	1	17W	LED	4100K	1	LF BALLAST	120-277V	_
(P)	LED LIGHTING FIXTURE — 6" DIA. X 7" MAX HEIGHT RECESSED DOWNLIGHT, 2000 MINIMUM LUMENS, SEMI—SPECULAR CLEAR REFLECTOR AND WHITE POLYMER TRIM, LED LIGHT BAR AND DRIVER ACCESSIBLE FROM BELOW THROUGH FIXTURE, WIDE—THOW CONVEX TRANSITIONAL LENS.	EXAM	LAY-IN GRID	1	32W MAX SYSTEM INPUT	LED	4100°K	1	DIMMING LED DRIVER	277V	_
0	LED LIGHTING FIXTURE — 4" DIA. X 7" MAX HEIGHT RECESSED DOWNLIGHT, 1200 MINIMUM LUMENS, SEMI—SPECULAR CLEAR REFLECTOR AND WHITE POLYMER TRIM, LED LIGHT BAR AND DRIVER ACCESSIBLE FROM BELOW THROUGH FIXTURE, CONVEX TRANSITIONAL LENS.	VARIOUS	-	1	22W MAX SYSTEM INPUT	LED	4100°K	1	LED DRIVER	277V	_
R	LED LIGHTING FIXTURE — 6"W X 5" MAX HEIGHT X 4'-0" LENGTH ON DRAWINGS, MATTE SATIN WHITE FINISH, FLUSH FROSTED LENS, L85 RATING AT 50,000 HOURS, MINIMUM OF 2400 DELIVERED LUMENS, COMPATIBLE WITH SPECIALTY GRID SYSTEM — COORDINATE WITH GC.	WAITING	SPECIALTY GRID SYSTEM	1	31W MAX SYSTEM INPUT	LED	4100°K	1	0-10V DIMMING DRIVER	277V	_
	LED LIGHTING FIXTURE — 7"W X 7.25"H X CUSTOM LENGTH ON DRAWINGS, 3.75" APERTURE PERIMETER WALL GRAZE LIGHTING FIXTURE, ADJUSTABLE 30 DEGREES TO GRAZE PEAK CANDELA DOWN WALL. MOUNT FIXTURE TO CEILING AND WALL. PROVIDE CONTINUOUS ROW LENGTH AS INDICATED ON DRAWINGS.	WAITING	DRYWALL CEILING AND WALL	1	7.6W/FT	LED	4100°K	1	LF BALLAST	277V	_
(s)	FLUORESCENT LIGHTING FIXTURE — 7"W X 3"H X 92.5"L COVE LIGHTING FIXTURE, ADJUSTABLE ASYMMETRIC SPECULAR ALUMINUM REFLECTOR. LIGHTING FIXTURE MOUNTS IN PREFABRICATED EXTRUDED ALUMINUM COVE FRAME SYSTEM AND GYPSUM BOARD FASTENS DIRECTLY TO FRAME. EC SHALL INSTALL COVE FRAME SYSTEM FOR VERTICAL OR HORIZONTAL ILLUMINATION AS INDICATED ON ARCHITECTURAL SECTIONS. PROVIDE CONTINUOUS ROW LENGTH AS INDICATED ON DRAWINGS.	CORRIDOR	COVE	2	54	T5H0	4100°K	1	LF BALLAST	277V	_
<ul><li>⊗</li><li>⊗</li><li>⊗</li></ul>	EXIT SIGN — LED TYPE, AC ONLY, SINGLE OR DOUBLE FACE, UNIVERSAL MOUNTING, DIE CAST ALUMINUM HOUSING WITH WHITE BODY, WHITE FACE AND RED STENCIL LETTERS. CONNECT TO EMERGENCY LIFE SAFETY CIRCUIT AHEAD OF LOCAL SWITCHING. UL 924 LISTED, UL DAMP LOCATION, UL LISTED FOR 2C.	VARIOUS		_	LESS THAN 2W	LED	_	_	_	120-277V	_
4	EMERGENCY BATTERY LIGHTING UNIT — SEALED LEAD CALCIUM BATTERY, HIGH—IMPACT POLYCARBONATE HOUSING, SELF—DIAGNOSTIC CIRCUITRY, PUSHBUTTON TEST SWITCH/POWER INDICATOR LIGHT. CONNECT AHEAD OF LOCAL SWITCHING (UNSWITCHED "HOT" LIGHTING CIRCUIT). WALL MOUNT AT 90" ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED.	VARIOUS		2	12W	PAR26	-	-	-	120-277V	_
<b>@</b>	L.E.D. WARNING LIGHT — 120/277V DUAL VOLTAGE INPUT, LED TYPE, AC ONLY, UNIVERSAL MOUNTING, SINGLE FACE, DIECAST ALUMINUM HOUSING WITH WHITE FINISH, RED STENCIL LETTERS ON WHITE FACE — "ROOM IN USE".	VARIOUS		1		LED				120-277V	

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Revisions:

VA FORM D8-6231, OCT 1978

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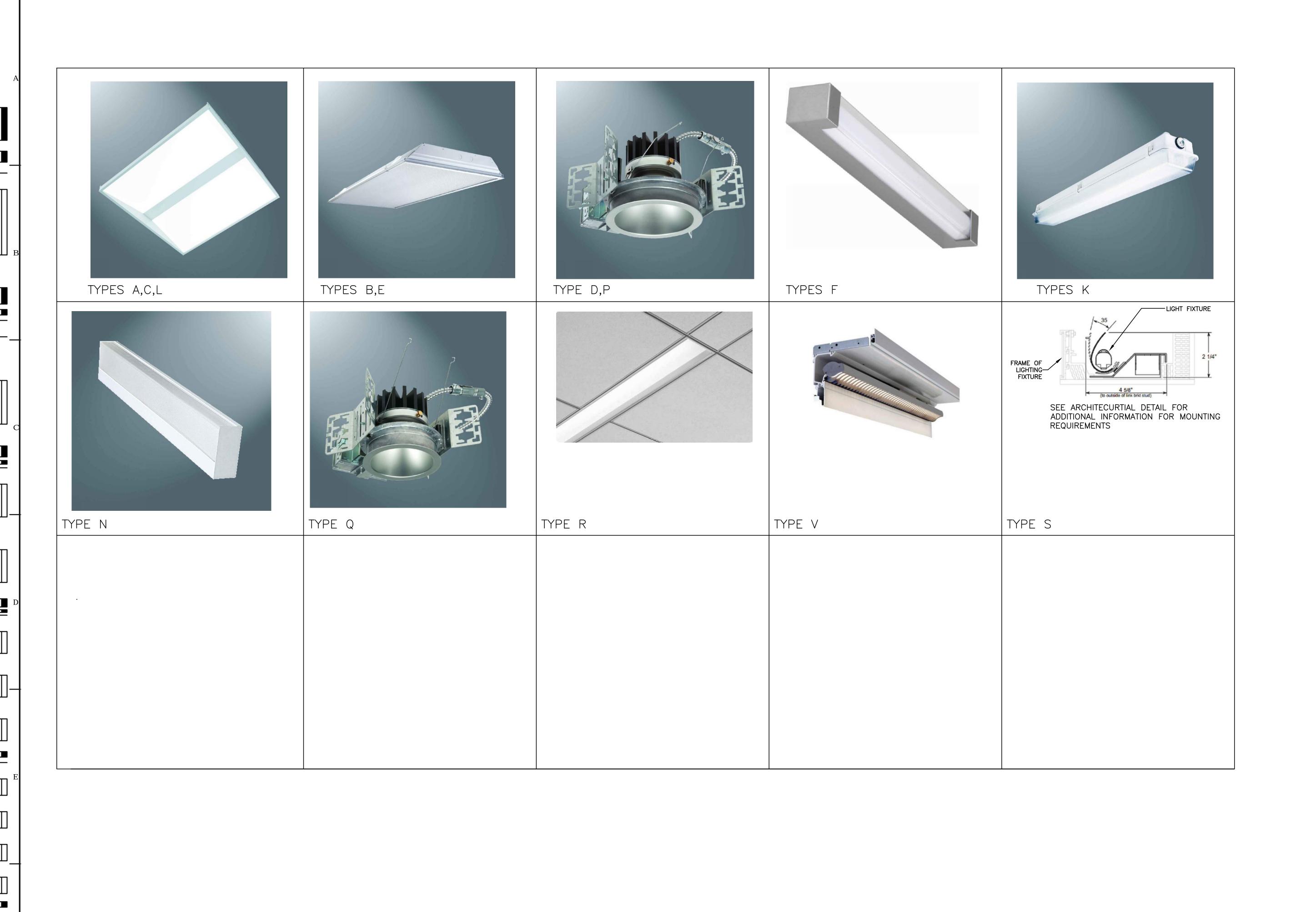
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MPL

Office of Facilities Management

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# GENERAL NOTES:

- G1. PHOTOGRAPHS ARE SHOWN FOR INFORMATION PURPOSES ONLY REGARDING THE STYLE OF THE FIXTURE.
- G2. REFER TO LIGHTING FIXTURE SCHEDULE 1-E1.2 AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

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Project Title Project Number 541-14-101 LIGHTING FIXTURE EXPAND AND RENOVATE **DETAILS** NUCLEAR MEDICINE AND Building Number RADIOLOGY Approved: Project Director Drawing Number Location VAMC - WADE PARK Drawn Checked MPL TAG 1-17-2014

Office of Facilities Management Department of Veterans Affairs

